

## BellBendCOLPEM Resource

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**From:** Canova, Michael  
**Sent:** Wednesday, August 26, 2009 4:25 PM  
**To:** Som, Swagata  
**Cc:** Jenkins, Ronaldo; Steckel, James; BellBendCOL Resource  
**Subject:** FW: Response to BBNPP RAI 32  
**Attachments:** BNP-2009-241.pdf

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**From:** Sgarro, Rocco R [mailto:[rsgarro@pplweb.com](mailto:rsgarro@pplweb.com)]  
**Sent:** Friday, August 21, 2009 3:42 PM  
**To:** Canova, Michael  
**Cc:** 'j freels'; 'Yox, Michael J'; 'Sullivan, David'  
**Subject:** Response to RAI 32

Mike,

Attached please find the subject response. Have a good weekend.

*Rocky*

R. R. Sgarro  
Manager - Nuclear Regulatory Affairs  
PPL Bell Bend, LLC  
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**Hearing Identifier:** BellBend\_COL\_Public  
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**Subject:** FW: Response to BBNPP RAI 32  
**Sent Date:** 8/26/2009 4:24:43 PM  
**Received Date:** 8/26/2009 4:24:45 PM  
**From:** Canova, Michael

**Created By:** Michael.Canova@nrc.gov

**Recipients:**

"Jenkins, Ronaldo" <Ronaldo.Jenkins@nrc.gov>  
Tracking Status: None  
"Steckel, James" <James.Steckel@nrc.gov>  
Tracking Status: None  
"BellBendCOL Resource" <BellBendCOL.Resource@nrc.gov>  
Tracking Status: None  
"Som, Swagata" <Swagata.Som@nrc.gov>  
Tracking Status: None

**Post Office:** HQCLSTR01.nrc.gov

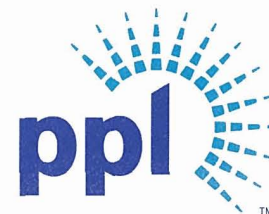
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BNP-2009-241.pdf	519180	

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**Reply Requested:** No  
**Sensitivity:** Normal  
**Expiration Date:**  
**Recipients Received:**

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August 21, 2009

ATTN: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

**BELL BEND NUCLEAR POWER PLANT  
RESPONSE TO RAI SET NO. 32  
BNP-2009-241      Docket No. 52-039**

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References: 1) M. Canova (NRC) to R. Sgarro (PPL Bell Bend, LLC), Bell Bend COLA – Request for Information No. 32 (RAI No. 32) – EEB - 2687, email dated July 27, 2009

The purpose of this letter is to respond to the request for additional information (RAI) identified in the referenced NRC correspondence to PPL Bell Bend, LLC. This RAI addresses Electrical Power - Introduction, as discussed in Section 8.1 of the Final Safety Analysis Report (FSAR), as submitted in Part 2 of the Bell Bend Nuclear Power Plant Combined License Application (COLA).

The enclosure provides our response to RAI No. 32, Questions 08.01-1, which includes revised COLA content. A Licensing Basis Document Change Request has been initiated to incorporate this change in a future revision of the COLA. This future revision of the COLA is the only new regulatory commitment.

Should you have questions or need additional information, please contact the undersigned at 570.802.8102.

*I declare under penalty of perjury that the foregoing is true and correct.*

Executed on August 21, 2009

Respectfully,

A handwritten signature in black ink, appearing to read "Rocco R. Sgarro". The signature is written in a cursive, flowing style.

Rocco R. Sgarro

Enclosure: As stated

cc: (w/o Enclosures)

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Enclosure 1

Response to NRC Request for Additional Information Set No. 32  
Bell Bend Nuclear Power Plant

### Question 08.01-1

Bell Bend NPP FSAR Sections 8.1.4.4 and 8.2.1.1 describes formal agreements and protocols between Bell Bend NPP and the transmission system operator (TSO) to provide safe and reliable operation of the transmission system and equipment at Bell Bend NPP. Please include the following additional information in a future revision of the FSAR:

- 1) A description of the communication procedures between the TSO and Bell Bend NPP;
- 2) A description of the associated training and testing of operators and maintenance personnel, as requested in GL 2006-02 questions 1(b), 1(c) and 1(d).

### Response

A description of the communications agreements and protocols in place between BBNPP and the transmission systems operator (TSO), and the BBNPP procedures and training will be added to FSAR Section 8.2.1.1.

### COLA Impact

The below text will be added to BBNPP FSAR Section 8.2.1.1 in a future COL revision:

PJM is the Transmission System Operator (TSO) and Reliability Coordinator for the PJM RTO (Regional Transmission Operator), responsible for regional Reliability coordination as defined in the NERC (North American Electric Reliability Corporation) and Regional Standards and applicable PJM Operating Manuals. PJM operates the transmission grid in compliance with good utility practice, NERC standards, and PJM policies, guidelines and operating procedures.

PPL Electric Utilities, as the Transmission System Owner (TO) interfacing with BBNPP, is required to operate its transmission facilities in accordance with the PJM Operating Manuals and follow PJM instructions related to PJM responsibilities.

PJM Manual 03, Transmission Operations, is one of a series of manuals within the PJM Transmission set. This manual focuses on specific transmission conditions and procedures for the operation of Designated Transmission Facilities. PJM Manual 03 includes a specific section titled, Notification and Mitigation Protocols for Nuclear Plant Voltage Limits. The purpose of this section is to ensure that nuclear plant operators are notified whenever actual or post-contingency voltages (i.e., loss of a given generation or transmission facility otherwise referred to as N-1) critical to ensuring that safety systems will work properly, are determined to be at or below acceptable limits.

The PJM Energy Management System (EMS) models and operates to the most restrictive substation voltage limit for both actual and N-1 contingency conditions. PJM will notify nuclear plants (including BBNPP) if the EMS results indicate nuclear substation voltage limits are or could be exceeded. This notification should occur within 15 minutes for voltage contingency violations and immediately for actual voltage limit violations. To the extent practicable, PJM will remedy the violation within 30 minutes.

Communications generally take place between PJM and the Transmission System Owner (PPL EU in the case of BBNPP). However, if there is a potential for confusion or miscommunication, PJM can talk directly with affected nuclear plants. If direct

communication is deemed necessary, the call will typically be three-way between PJM, the nuclear plant, and the Transmission System Owner.

While PJM generally will not provide transmission operation information to any individual market participant without providing that information to all market participants, the manual recognizes the unique condition where the public health and safety is dependent upon reliable power to a nuclear power plant, and permits PJM operators to provide nuclear power plants with actual voltage at the plant location, the post-contingency voltage at the plant location, and the limiting contingency causing the violation.

In addition to these requirements, PJM Manual 03 requires that nuclear power plants be notified (via the Transmission System Owner) if the ability to perform voltage drop/post-contingency calculations is lost for any reason.

BBNPP will have instructions to comply with NERC and PJM requirements requiring notification to the TSO of:

- ◆ Any unplanned changes to the main generator output (real or reactive load), including the duration of the change
- ◆ Any changes to the status of the main generator automatic voltage regulator (e.g., a transfer to manual voltage control from automatic), including the expected duration of the change
- ◆ Any inability to comply with reliability directives received from the TSO when such actions would violate safety, equipment, regulatory, or statutory requirements

(The above notifications will be made as soon as practicable but generally not to exceed 30 minutes)

- ◆ Main Generator outages
- ◆ Changes in plant conditions that may affect the interconnection such as:
  - Sabotage
  - Power changes
  - Switchyard operations
  - Plans to conduct trip sensitive operations or tests

Additionally, notifications to NERC are required for events such as severe grid voltage/frequency disturbances.

Operators will receive classroom and simulator training on recognition of grid conditions, selecting the appropriate procedure for response, and procedure usage as part of the standard operator training program. Knowledge gained in this training will be tested by written quizzes and evaluated simulator scenarios.

No formal training or testing regarding the TSO protocols is given to operators or maintenance personnel.